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Synchrotron infrared reflection-absorption (IRAS) studies of C_{60} deposited on clean and alkali-covered Ag(111), Au(110) and Cu(111), have been performed. On bare substrates, the frequencies and intensities of the only observable dipole active mode are as shown in Fig.1. The remarkable observation is that the frequency shift, as well as the integrated intensity of the dipole active mode, does not follow what one could expect if charge transfer between the substrate and the C_{60} admolecule is the dominant mechanism. These results suggest that complex electron-phonon coupling occurs at these interfaces. Such a coupling is also thought to play an important role when C_{60} is deposited on 1ML K/Ag(111). This is illustrated in Fig. 2. When C_{60} is adsorbed on 1ML of K pre-deposited on Ag(111), an antiabsorption band is clearly seen, at the frequency position of the initial Ag(2) mode. However, for thicker alkali layers, two bands are observed: one, showing up as an absorption band at 1356 cm^{-1} . This is the fulleride mode, of the "bulk" phase. However, the observation of the antiabsorption mode shows that the entire alkali layer is involved with the process.

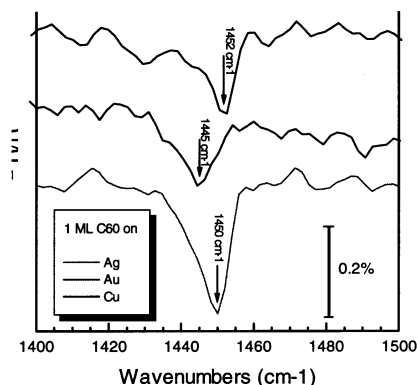


Figure 1.

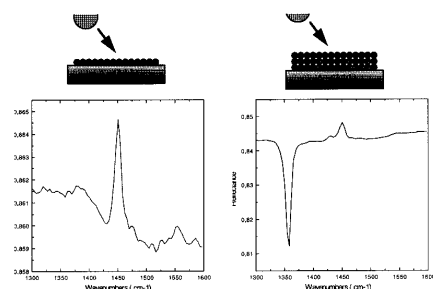


Figure 2.